

Aero Design Ltd.**Work Order Control Sheet**Work Order#: 2016-72 Date Opened: 11 May 2016 Title: FabricationAircraft OEM: Airbus Helicopters Aircraft Model: AS350/AS355 Product Type: Beams Product Model: LH Quantity: 10 Aft LH**Work Order Contents**

	Initial or N/A
Work Order/Build Sheets (Procedures Provided)	JC
Additional Work Sheets (Standard Practice)	N/A
Drawings (See List Below)	JC
Parts Distribution Sheet	JC
Sub Component Tags	N/A
Completed Certification (Original)	N/A
Time Sheet (R&D)	N/A
Notes	N/A

Build Sheet Contents

Tasks Initialled	JC
Dual Inspections Initialled	JC

Drawing List

Drawing #	Rev #	Description	Initial or N/A
78633	1	Aft Beam	JC

Traveller**Component Completion**

	As Instructed
Quantity Complete on This Work Order	10
Quantity Incomplete on This Work Order	N/A
Further Processing Required Before Release	N/A
Release to Stock as Components	N/A

Certification

	Initial or N/A
Form One Completed	JC
Serviceable (Green) Tag Completed	N/A
In Process (Yellow) Tag Completed	N/A
Unserviceable (Red) Tag Completed	N/A
Parts Tracking Tags (White) Completed	JC
Parts Placed in Stores for Distribution	N/A

Additional Documentation

	Initial or N/A
Documentation of a minor change	N/A
Non-Conformance Report Required	N/A
Service Difficulty Report Required	N/A

Billing

Local (Aero Design)	JC
Research and Development	N/A
Third Party	N/A

Work performed by:

Print: D. Bartfai

ICC / Dual Inspection performed by:

Print: J. Clarke

Work Order closed by:

Print: J. Clarke

Approved Manufacturing Facility 73-04

Sign:

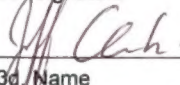
Sign:

Sign:

Form 20.D/08

SCA: AD07SCA: AD02SCA: AD02Date: 09-Jun-16Date: 09-Jun-16Date: 13-Jan-17

Rev. Original 23 Sep 2014

1. Approving Civil Aviation Authority/Country Transport Canada		2. AUTHORIZED RELEASE CERTIFICATE FORM ONE			3. Form Tracking No. 2017-0029		
4. Organization Name and Address AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3					5. Work Order/Contract/Invoice WO 2016-72		
6. Item 1.	7. Description LH Aft Beam	8. Part Number 78633-01-02	9. Qty. 1	10. Serial/Batch No. N/A	11. Status/Work New		
12. Remarks Black							
13a. Certifies that the items identified above were manufactured in conformity to: <input checked="" type="checkbox"/> Approved design data and are in condition for safe operation. <input type="checkbox"/> Non approved design data specified in block 12.			14a. <input type="checkbox"/> CAR 571.10 Maintenance Release <input type="checkbox"/> Other regulation specified in block 12 Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the Canadian Aviation Regulations.				
13b. Signature  AD 73-04 02		13c. Approved Organization Number AMF 73-04		14b. Signature		14c. Approved Organization Number	
13d. Name Jeff Clarke - AD02		13e. Date (dd/mm/yyyy) 13 Jan 2017		14d. Name		14e. Date (dd/mm/yyyy)	
<p align="center">Installer Responsibilities</p> <p>This certificate does not constitute authority to install.</p> <p>Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.</p> <p>Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.</p>							

PUMA AIR

EAGLE COPTERS SOUTH AMERICA S.A.

[illegible]

1. Approving Civil Aviation Authority/Country Transport Canada		2. AUTHORIZED RELEASE CERTIFICATE FORM ONE			3. Form Tracking No. 2016-0223	
4. Organization Name and Address AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3					5. Work Order/Contract/Invoice WO 2016-72	
6. Item 1.	7. Description LH Aft Beam	8. Part Number 78633-01-02	9. Qty. 1	10. Serial/Batch No. N/A	11. Status/Work New	
12. Remarks						
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13b. Signature <i>Jeff Clarke</i> AD 73-04 02		13c. Approved Organization Number AMF 73-04		14b. Signature		14c. Approved Organization Number
13d. Name Jeff Clarke - AD02		13e. Date (dd/mmm/yyyy) 21 Nov 2016		14d. Name		14e. Date (dd/mmm/yyyy)
<p align="center">Installer Responsibilities</p> <p>This certificate does not constitute authority to install.</p> <p>Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.</p> <p>Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.</p>						

IMS NEW ZEALAND



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:

1

PN:

78633-01-02

Aircraft:

Eurocopter

Model: AS350/355

Description:

L.H. AFT Beam

Supplier:

Aero Design

Color:

White

WO#:

2016-72

PO# N/A



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:

1

PN:

78633-01-02

Aircraft:

Eurocopter

Model: AS350/355

Description:

L.H. AFT Beam

Supplier:

Aero Design

Color:

White

WO#:

2016-72

PO# N/A


1. Approving Civil Aviation Authority/Country Transport Canada		2. AUTHORIZED RELEASE CERTIFICATE FORM ONE			3. Form Tracking No. 2016-0219
4. Organization Name and Address AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3					5. Work Order/Contract/Invoice WO 2016-72
6. Item 1.	7. Description LH Aft Beam	8. Part Number 78633-01-02	9. Qty. 1	10. Serial/Batch No. N/A	11. Status/Work New
12. Remarks					
13a. Certifies that the items identified above were manufactured in conformity to: <input checked="" type="checkbox"/> Approved design data and are in condition for safe operation. <input type="checkbox"/> Non approved design data specified in block 12.			14a. <input type="checkbox"/> CAR 571.10 Maintenance Release <input type="checkbox"/> Other regulation specified in block 12 Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the Canadian Aviation Regulations.		
13b. Signature <i>Jeff Clarke</i> AD 73-04 02		13c. Approved Organization Number AMF 73-04		14b. Signature	
13d. Name Jeff Clarke - AD02		13e. Date (dd/mm/yyyy) 18 Nov 2016		14c. Approved Organization Number	
				14d. Name	
				14e. Date (dd/mm/yyyy)	
<p align="center">Installer Responsibilities</p> <p>This certificate does not constitute authority to install.</p> <p>Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.</p> <p>Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.</p>					

AIRBUS HELICOPTERS



WO# _____

For WO#	
Moved to PIN	PDS JK

1. Approving Civil Aviation Authority/Country Transport Canada		2. AUTHORIZED RELEASE CERTIFICATE FORM ONE			3. Form Tracking No. 2016-0214	
4. Organization Name and Address AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3					5. Work Order/Contract/Invoice WO 2016-72	
6. Item 1.	7. Description LH Aft Beam	8. Part Number 78633-01-02	9. Qty. 1	10. Serial/Batch No. N/A	11. Status/Work New	
12. Remarks						
13a. Certifies that the items identified above were manufactured in conformity to: <input checked="" type="checkbox"/> Approved design data and are in condition for safe operation. <input type="checkbox"/> Non approved design data specified in block 12.			14a. <input type="checkbox"/> CAR 571.10 Maintenance Release <input type="checkbox"/> Other regulation specified in block 12 Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the Canadian Aviation Regulations.			
13b. Signature 		13c. Approved Organization Number AMF 73-04		14b. Signature		14c. Approved Organization Number
13d. Name Jeff Clarke - AD02		13e. Date (dd/mmm/yyyy) 18 Nov 2016		14d. Name		14e. Date (dd/mmm/yyyy)
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AIRBUS HELICOPTERS



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity: 1

PN: 78633-01-02

Aircraft: Eurocopter Model: AS350/355

Description: L.H. AFT Beam

Supplier: Aero Design

Color: White

WO#: 2016-72 PO# N/A



WO# _____

Moved to pin PDS JC.



WO#

PDS JK

1. Approving Civil Aviation Authority/Country Transport Canada		2. AUTHORIZED RELEASE CERTIFICATE FORM ONE			3. Form Tracking No. 2016-0182
4. Organization Name and Address AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3					5. Work Order/Contract/Invoice WO 2016-72
6. Item 1.	7. Description LH Aft Beam	8. Part Number 78633-01-02	9. Qty. 1	10. Serial/Batch No. N/A	11. Status/Work New
12. Remarks					
13a. Certifies that the items identified above were manufactured in conformity to: <input checked="" type="checkbox"/> Approved design data and are in condition for safe operation. <input type="checkbox"/> Non approved design data specified in block 12.			14a. <input type="checkbox"/> CAR 571.10 Maintenance Release <input type="checkbox"/> Other regulation specified in block 12 Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the Canadian Aviation Regulations .		
13b. Signature  AD 73-04 02		13c. Approved Organization Number AMF 73-04		14b. Signature	
13d. Name Jeff Clarke - AD02		13e. Date (dd/mm/yyyy) 29 Sept 2016		14c. Approved Organization Number	
				14d. Name	
				14e. Date (dd/mm/yyyy)	
<p align="center">Installer Responsibilities</p> <p>This certificate does not constitute authority to install.</p> <p>Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.</p> <p>Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.</p>					

AIRBUS HELICOPTERS



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:

1

PN:

78633-01-02

Aircraft:

Eurocopter

Model: AS350/355

Description:

L.H. AFT Beam

Supplier:

Aero Design

Color:

White

WO#:

2016-72

PO# N/A

Aero Design

Parts Distribution Sheet

AS350 AFT LH Beam

Air Bus HELI

24 Sept 2016

WO# 2016-12

[illegible]

1. Approving Civil Aviation Authority/Country Transport Canada		2. AUTHORIZED RELEASE CERTIFICATE FORM ONE			3. Form Tracking No. 2016-0146
4. Organization Name and Address AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3					5. Work Order/Contract/Invoice WO 2016-72
6. Item 1.	7. Description LH Aft Beam	8. Part Number 78633-01-02	9. Qty. 1	10. Serial/Batch No. N/A	11. Status/Work New
12. Remarks					
13a. Certifies that the items identified above were manufactured in conformity to: <input checked="" type="checkbox"/> Approved design data and are in condition for safe operation. <input type="checkbox"/> Non approved design data specified in block 12.			14a. <input type="checkbox"/> CAR 571.10 Maintenance Release <input type="checkbox"/> Other regulation specified in block 12. Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the Canadian Aviation Regulations.		
13b. Signature  AD 73-04 02		13c. Approved Organization Number AMF 73-04		14b. Signature	
13d. Name Jeff Clarke - AD02		13e. Date (dd/mmm/yyyy) 07 Sept 2016		14c. Approved Organization Number	
				14d. Name	
				14e. Date (dd/mmm/yyyy)	
<p align="center">Installer Responsibilities</p> <p>This certificate does not constitute authority to install.</p> <p>Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.</p> <p>Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.</p>					

West Coast Heli



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity: 1

PN: 78633-01-02

Aircraft: Eurocopter

Model: AS350/355

Description: L.H. AFT Beam


Supplier: Aero Design

Color: White

WO#: 2016-72

PO# N/A

[illegible]

1. Approving Civil Aviation Authority/Country Transport Canada		2. AUTHORIZED RELEASE CERTIFICATE FORM ONE			3. Form Tracking No. 2016-0123
4. Organization Name and Address AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3					5. Work Order/Contract/Invoice WO 2016-72
6. Item 1.	7. Description LH Aft Beam	8. Part Number 78633-01-02	9. Qty. 1	10. Serial/Batch No. N/A	11. Status/Work New
12. Remarks					
13a. Certifies that the items identified above were manufactured in conformity to: <input checked="" type="checkbox"/> Approved design data and are in condition for safe operation. <input type="checkbox"/> Non approved design data specified in block 12.			14a. <input type="checkbox"/> CAR 571.10 Maintenance Release <input type="checkbox"/> Other regulation specified in block 12. Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the Canadian Aviation Regulations .		
13b. Signature 		13c. Approved Organization Number AMF 73-04		14b. Signature	
13d. Name Jeff Clarke - AD02		13e. Date (dd/mm/yyyy) 10 Aug 2016		14c. Approved Organization Number	
				14d. Name	
				14e. Date (dd/mm/yyyy)	
<p align="center">Installer Responsibilities</p> <p>This certificate does not constitute authority to install.</p> <p>Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.</p> <p>Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.</p>					

HELI EXPRESS



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity:

1.

PN:

78633-01-02

Aircraft:

Eurocopter

Model: AS350/355

Description:

L.H. AFT Beam

Supplier:

Aero Design

Color:

White

WO#:

2016-72

PO# N/A




WO# 2016-72

Approved Manufacturing Facility 73-04

Form 20.F.06

Rev. Original 27 May 2013

1. Approving Civil Aviation Authority/Country Transport Canada		2. AUTHORIZED RELEASE CERTIFICATE FORM ONE			3. Form Tracking No. 2016-0103	
4. Organization Name and Address AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3					5. Work Order/Contract/Invoice WO 2016-72	
6. Item 1.	7. Description LH Aft Beam	8. Part Number 78633-01-02	9. Qty. 1	10. Serial/Batch No. N/A	11. Status/Work New	
12. Remarks						
13a. Certifies that the items identified above were manufactured in conformity to: <input checked="" type="checkbox"/> Approved design data and are in condition for safe operation. <input type="checkbox"/> Non approved design data specified in block 12.				14a. <input type="checkbox"/> CAR 571.10 Maintenance Release <input type="checkbox"/> Other regulation specified in block 12 Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the Canadian Aviation Regulations.		
13b. Signature  AD 73-04 02		13c. Approved Organization Number AMF 73-04		14b. Signature		14c. Approved Organization Number
13d. Name Jeff Clarke - AD02		13e. Date (dd/mmm/yyyy) 06 July 2016		14d. Name		14e. Date (dd/mmm/yyyy)
<p align="center">Installer Responsibilities</p> <p>This certificate does not constitute authority to install.</p> <p>Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.</p> <p>Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.</p>						

BLACK COMB



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity: 1
PN: 78633-01-02
Aircraft: Eurocopter
Description: L.H. AFT Beam
Supplier: Aero Design
Color: White
WO#: 2016-72

Model: AS350/355

PO# N/A

06 July 2016



Description: 45350 BEANS

WO#[illegible]

1. Approving Civil Aviation Authority/Country Transport Canada		2. AUTHORIZED RELEASE CERTIFICATE FORM ONE			3. Form Tracking No. 2016-0099
4. Organization Name and Address AERO Design Ltd. – 9888A Malaspina Road, Powell River, BC, V8A 0G3					5. Work Order/Contract/Invoice WO 2016-72
6. Item 1.	7. Description LH Aft Beam	8. Part Number 78633-01-02	9. Qty. 1	10. Serial/Batch No. N/A	11. Status/Work New
12. Remarks					
13a. Certifies that the items identified above were manufactured in conformity to: <input checked="" type="checkbox"/> Approved design data and are in condition for safe operation. <input type="checkbox"/> Non approved design data specified in block 12.			14a. <input type="checkbox"/> CAR 571.10 Maintenance Release <input type="checkbox"/> Other regulation specified in block 12. Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the Canadian Aviation Regulations.		
13b. Signature <i>Jeff Clarke</i> 73-04 02		13c. Approved Organization Number AMF 73-04		14b. Signature	
13d. Name Jeff Clarke - AD02		13e. Date (dd/mmm/yyyy) 04 July 2016		14c. Approved Organization Number	
				14d. Name	
				14e. Date (dd/mmm/yyyy)	
<p align="center">Installer Responsibilities</p> <p>This certificate does not constitute authority to install.</p> <p>Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.</p> <p>Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.</p>					

Airspan



Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC
V8A 0G3, 604-483-AERO (2376)

Quantity: 1

PN: 78633-01-02

Aircraft: Eurocopter

Model: AS350/355

Description: L.H. AFT Beam

Supplier: Aero Design

Color: White

WO#: 2016-72

PO# N/A

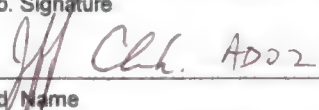
04 JULY 2016



AS350 LH BEAMS

WO# _____

N/A

1. Approving Civil Aviation Authority/Country Transport Canada		2. AUTHORIZED RELEASE CERTIFICATE FORM ONE			3. Form Tracking No. 2016-0084	
4. Organization Name and Address Aero Design Ltd. – 9888 A Malaspina Rd. Powell River, BC, V8A 0G3					5. Work Order/Contract/Invoice 2016-72	
6. Item 1.	7. Description LH Aft Beam	8. Part Number 78633-01-02	9. Qty. 1	10. Serial/Batch No. NSN	11. Status/Work New	
12. Remarks						
13a. Certifies that the items identified above were manufactured in conformity to: <input checked="" type="checkbox"/> Approved design data and are in condition for safe operation. <input type="checkbox"/> Non approved design data specified in block 12.				14a. <input type="checkbox"/> CAR 571.10 Maintenance Release <input type="checkbox"/> Other regulation specified in block 12 Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the Canadian Aviation Regulations.		
13b. Signature 		13c. Approved Organization Number AMF 73-04		14b. Signature		14c. Approved Organization Number
13d. Name Jeff Clarke – AD02		13e. Date (dd/mmm/yyyy) 16 June 2016		14d. Name		14e. Date (dd/mmm/yyyy)
<p align="center">Installer Responsibilities</p> <p>This certificate does not constitute authority to install.</p> <p>Installers working in accordance with the national regulations of a country other than that specified in block 1 must ensure that their regulations recognize certifications from the country specified.</p> <p>Statements in blocks 13a or 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.</p>						

Blackcomb

MOUNTING BEAM FABRICATION – 78633/78634

General

These instructions apply to mounting beams 78633-01 (aft) and 78634-01 (forward) for AS350/AS355 cargo baskets. Refer to the following drawings, at the current revision, for dimensions and details:

78633, Revision 1 – Aft Beam

78634, Revision 1 – Forward Beam

Work Order: 2016-72 - A

Batch Quantity: 10 LH AFT

Complete
(initial or SCA #)

Date Open: 11 MAY 2016

AD	AD	AD	AD	AD
73-04	73-04	73-04	73-04	73-04
01	01	01	01	01

1. Beam Fabrication – 1x2 tubes – 78633-01 / 78634-01

- Cut 1 x 2 x 0.065 material as indicated on drawings.
 - 78633-02 – 24.44"
 - 78634-02 – 24.25"
- Cut 1 x 2 x 0.120 material @ 16.38" long for upper guide (10).
- Record material PO on attached material list.
- De-burr cut ends using a sanding disc on a die-grinder. De-burr inside with de-burring tool.
- Remove writing on tubes with acetone.
- Tag in-progress parts and place on in-progress shelf in machine shop for CNC machining of keyways, slots, and bushing holes.

AD	AD	AD	AD	AD
73-04	73-04	73-04	73-04	73-04
02	02	02	02	02

2. CNC Machining – 78633-01 / 78634-01

- Run CNC programs to machine slots and holes in 78633-02 tubes and 78634-02 tubes.
- Run CNC programs to machine blanks for upper guides.
- De-burr slots and holes.
- Tag in-progress parts and place on in-progress shelf in welding shop for welding.

AD	AD	AD	AD	AD
73-04	73-04	73-04	73-04	73-04
01	01	01	01	01

3. Beam Fabrication – Components – 78633-01

Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.

- Shear caps from 0.025" sheet: 78633-06
- Cut 78633-03 guides from 1x1/8 stock.
- Cut and turn 78630-04 bushings from 3/8 x 0.065 tube:
 - Cut stock to length + 0.03-0.06".
 - Face one end flat @ 1000 RPM.
 - De-burr outside with a file and inside with de-burring tool at 300 RPM.
 - Setup stop and face other end to length @ 1000 RPM.
 - De-burr outside with a file and inside with a de-burring tool at 300 RPM.
- Cut 78633-04 upper guides from blanks machined in step 2.b.
- Cut 78633-05 stop brackets from 0.75 x 0.065 tube.
- Cut 82735-03 step tubes from 1.0 x 0.035 tube.
- Punch 82735-06 step cap from 0.050 sheet, 1.25 diameter. Flatten on steel table with a hammer.

- h. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop.

4. Beam Fabrication – Components – 78634-01

Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.

- a. Shear caps from 0.025" sheet: 78634-04.
- b. Cut 78634-03/78634-11/78634-12 pads from 1x1/8 stock. *N/A*
- c. Cut and turn 69830-11 guide tubes from 1/4 x 0.065 tube:
 - i. Cut stock to length + 0.03-0.06".
 - ii. Face one end flat @ 1000 RPM.
 - iii. De-burr outside with a file and inside with de-burring tool at 300 RPM.
 - iv. Setup stop and face other end to length @ 1000 RPM.
 - v. De-burr outside with a file and inside with a de-burring tool at 300 RPM.
- d. Cut 69830-07 blocks.
- e. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop.

AD
73-04
02

AD
73-04
05

AD
73-04
05

AD
73-04
05

AD
73-04
05

5. Beam Welding – 78633-01

- a. TIG weld 78633-03 guide, 4 places, and 78633-04 upper guide into 78633-02 tubes using ER308L rod.
 - i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
- b. Record component and welding rod POs / WOs on attached material list.
- c. Tag in-progress parts for straightening.

6. Beam Welding – 78634-01

- a. TIG weld 78634-04 pad, 3 places; 78634-11 pad, 1 place; and 78634-12 pad, 1 place, into 78634-02 tube.
 - i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
- b. Record component and welding rod POs / WOs on attached material list.
- c. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

N/A *AD*
73-04
02

AD
73-04
07

AD
73-04
07

AD
73-04
07

AD
73-04
07

7. Beam Straightening – 78633-01 / 78634-01

Welding on one side of the beam causes the beam to curve. Beams must be straight prior to machining slots.

- a. Set beam on blocks as far apart as possible on hydraulic press.
- b. Use a 2" block to distribute press loads.
- c. Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
- d. Check for straight with a straight edge on back of tube.
- e. 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
- f. Tag in-progress parts and place on in-progress shelf in CNC shop for machining.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

8. CNC Machining – 78633-01 / 78634-01

- Run CNC programs to machine keyways and slots in 78633-02 tubes with guides welded in place, after straightening.
- Run CNC programs to machine keyways and slots in 78634-02 tubes with pads welded in place, after straightening.
- De-burr keyways and slots.
- Tag in-progress parts and place on in-progress shelf in welding shop for welding.

9. Beam Welding – 78633-01

- Peg step: TIG weld 82735-06 cap to 82735-03 tube using jig to align cap to tube.
- TIG weld 78633-04 bushings into 78633-02 tube using ER308L rod, four places per tube, both sides.
- TIG weld 78633-05 stop bracket to 78633-02 tube using ER308L rod, four places per tube, both sides. Use jig to align stop brackets for height and position.
- TIG weld 78633-06 cap to 78633-02 tube.
- TIG weld step tube assembly from a. to back of 78633-02 tube using jig for alignment. Weld around step tube as far as possible, then close out tube by flattening protruding edge of step tube with a hammer. Complete weld after flattening.
- Record component and welding rod POs / WO on attached material list.
- Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

10. Beam Welding – 78634-01

- TIG weld 69830-11 guide tubes into 78634-02 tubes using ER308L rod, two places per down tube. Use jig to align guide tube to keyway and hole. Grind rosette welds flush.
- TIG weld 78633-04 bushings into 78634-02 tube using ER308L rod, four places per tube, both sides.
- TIG weld 69830-11 block to 78634-02 tube over 3rd keyway (see drawing) using ER308L rod.
- TIG weld 78634-04 cap to 78634-02 tube. Ensure 0.25" gap between cap and pad for basket fitting to enter top keyway.
- Record component and welding rod POs / WO on attached material list.
- Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

11. Beam Finishing – 78633-01 / 78634-01

Welding on one side of the beam causes the beam to curve. Beams must be straight prior to powder coating.

- Set beam on blocks on hydraulic press. Straightening in sections may be required depending on severity of curve.
- Use a 2" block to distribute press loads.
- Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
- Check for straight with a straight edge on back of tube.
- 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
- Drill out bushings to F (0.257"), four places per beam, on drill press.
- Break sharp edges on stops and flatten bushing locations using sanding disc on die-grinder.
- Tag in-progress parts and place on in-progress shelf in welding shop for inspection.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

12. Final Inspection – 78633-01 / 78634-01

To be completed by a different person than the previous steps.

- Inspect beams 78633-01 and 78634-01 for conformity to drawings.
- Tag in-progress parts ready for powder coating.

13. Powder Coating

- Parts are to be powder coated white in accordance with commercial practices.
- Record powder coating PO.
- Inspect powder coating on receiving.
- Tag in-progress parts ready for final assembly.

14. Final Assembly – 78633-01

To be completed after powder coating.

- Prepare step tube for grip tape by rubbing top surface with scotch-brite.
- Adhere 1" 3M Safety-Walk grip tape to top surface of step tube.
- Adhere P/N placard to back surface of beam.
- Ensure AN4 bolt can be inserted through bushings.
- Green tag complete beam assembly and place into stock.

15. Final Assembly – 78634-01

To be completed after powder coating.

- Clear powder coat from stop pin hole(s) with 5/16 (#4) centre drill.
- For 776 (short), 764 (medium) or 784 (long) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into UPPER guide with 69830-22 knob and MS21044C3 nut. Check for function.
- For 940 (extra large) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
- If maintenance step is to be installed: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
- Adhere P/N placard to back surface of beam.
- Green tag complete beam assembly and place into stock.

Work Order: 2016-72Material Tracking Sheet
Eurocopter AS350/AS355 Aft Mounting Beam

1 of 2

Date Opened: 11 MAY 2016

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
	<u>5</u>		78633-01- <u>02</u>	Aft Beam Assembly	(XX = -01 RH, -02 LH)	
Step 1				<i>Fabrication</i>		
	. 1		78633-02	Tube	1x2x0.065 Tube, 304 Stainless Steel	<u>16024</u>
	. 1		78633-04	Upper Guide	1x2x0.12 Tube, 304 Stainless Steel	<u>2015-69</u>
Step 2				<i>Machning</i>	<i>None</i>	
Step 3				<i>Fabrication</i>		
	. 4		78633-03	Guide	1x0.125 Bar, 304 Stainless Steel	<u>15073</u>
	. 4		78633-05	Stop Bracket	0.75x0.065 Sqr. Tube, 304 Stainless	<u>15038</u>
	. 1		78633-06	Cap	0.025" Sheet, 321 Stainless Steel	<u>3021</u>
	. 4		78630-04	Bushing	0.375 x 0.065 Tube, 304 Stainless Steel	<u>15073</u>
	. 1		82735-03	Tube	1.0 x 0.035 Tube, 316 Stainless Steel	<u>14103-15073-28</u>
	. 1		82735-06	Cap	0.050 Sheet, 321 Stainless Steel	<u>3021</u>
Step 5				<i>Welding</i>		
	. A/R			Welding Rod	ER308L	<u>14028</u>
Step 7				<i>Straightening</i>	<i>None</i>	
Step 8				<i>Machning</i>	<i>None</i>	
Step 9				<i>Welding</i>		
	. A/R			Welding Rod	ER308L	<u>14028</u>
Step 11				<i>Finishing</i>	<i>None</i>	
Step 12				<i>Final Inspection</i>	<i>None</i>	
Step 13				<i>Powder Coating</i>		<u>16045</u>
		Detail				

Work Order: 2016-72

Material Tracking Sheet
Eurocopter AS350/AS355 Aft Mounting Beam

2 of 2

Date Opened: 11 MAY 2016

Ass'y Step	Qty	Drawing	Part Number	Description	Material	PO/WO
Step 14				<i>Final Assembly</i>		
	. 1		--	Grip Tape	1" 3M Safety Walk	
	. 1		--	P/N Placard	TZ tape, 1/2", white on black	

MOUNTING BEAM FABRICATION – 78633/78634

General

These instructions apply to mounting beams 78633-01 (aft) and 78634-01 (forward) for AS350/AS355 cargo baskets. Refer to the following drawings, at the current revision, for dimensions and details:

78633, Revision 1 – Aft Beam

78634, Revision 1 – Forward Beam

Work Order: 2016-72-B

Batch Quantity: 10 LH AFT

Date Open: 11 MAY 2016

Complete
(initial or SCA #)

73-01	73-04	73-04	73-04	73-04
AD	AD	AD	AD	AD
01	01	01	01	01

1. Beam Fabrication – 1x2 tubes – 78633-01 / 78634-01

- Cut 1 x 2 x 0.065 material as indicated on drawings.
 - 78633-02 – 24.44"
 - 78634-02 – 24.25"
- Cut 1 x 2 x 0.120 material @ 16.38" long for upper guide (10).
- Record material PO on attached material list.
- De-burr cut ends using a sanding disc on a die-grinder. De-burr inside with de-burring tool.
- Remove writing on tubes with acetone.
- Tag in-progress parts and place on in-progress shelf in machine shop for CNC machining of keyways, slots, and bushing holes.

73-04	73-04	73-04	73-04	73-04
AD	AD	AD	AD	AD
02	02	02	02	02

2. CNC Machining – 78633-01 / 78634-01

- Run CNC programs to machine slots and holes in 78633-02 tubes and 78634-02 tubes.
- Run CNC programs to machine blanks for upper guides.
- De-burr slots and holes.
- Tag in-progress parts and place on in-progress shelf in welding shop for welding.

73-04	73-04	73-04	73-04	73-04
AD	AD	AD	AD	AD
01	01	01	01	01

3. Beam Fabrication – Components – 78633-01

Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.

- Shear caps from 0.025" sheet: 78633-06
- Cut 78633-03 guides from 1x1/8 stock.
- Cut and turn 78630-04 bushings from 3/8 x 0.065 tube:
 - Cut stock to length + 0.03-0.06".
 - Face one end flat @ 1000 RPM.
 - De-burr outside with a file and inside with de-burring tool at 300 RPM.
 - Setup stop and face other end to length @ 1000 RPM.
 - De-burr outside with a file and inside with a de-burring tool at 300 RPM.
- Cut 78633-04 upper guides from blanks machined in step 2.b.
- Cut 78633-05 stop brackets from 0.75 x 0.065 tube.
- Cut 82735-03 step tubes from 1.0 x 0.035 tube.
- Punch 82735-06 step cap from 0.050 sheet, 1.25 diameter. Flatten on steel table with a hammer.

- h. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop.

4. Beam Fabrication – Components – 78634-01

Note: Some components are used for many different beams and are made in batches on separate component work orders. Check stock before making components.

- a. Shear caps from 0.025" sheet: 78634-04.
- b. Cut 78634-03/78634-11/78634-12 pads from 1x1/8 stock.
- c. Cut and turn 69830-11 guide tubes from $\frac{3}{4}$ x 0.065 tube:
 - i. Cut stock to length + 0.03-0.06".
 - ii. Face one end flat @ 1000 RPM.
 - iii. De-burr outside with a file and inside with de-burring tool at 300 RPM.
 - iv. Setup stop and face other end to length @ 1000 RPM.
 - v. De-burr outside with a file and inside with a de-burring tool at 300 RPM.
- d. Cut 69830-07 blocks.
- e. Record component POs / WOs on attached material list and place on in-progress shelf in welding shop.

AD
73-04 05 AD
73-04 05 AD
73-04 05 AD
73-04 05 AD
73-04 05

5. Beam Welding – 78633-01

- a. TIG weld 78633-03 guide, 4 places, and 78633-04 upper guide into 78633-02 tubes using ER308L rod.
 - i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
- b. Record component and welding rod POs / WOs on attached material list.
- c. Tag in-progress parts for straightening.

6. Beam Welding – 78634-01

- a. TIG weld 78634-04 pad, 3 places; 78634-11 pad, 1 place; and 78634-12 pad, 1 place, into 78634-02 tube.
 - i. Clamp two beams back to back with 1/8" spacer in middle to pre-stress beams prior to welding.
- b. Record component and welding rod POs / WOs on attached material list.
- c. Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

AD
73-04 02 AD
73-04 02 AD
73-04 02 AD
73-04 02

7. Beam Straightening – 78633-01 / 78634-01

Welding on one side of the beam causes the beam to curve. Beams must be straight prior to machining slots.

- a. Set beam on blocks as far apart as possible on hydraulic press.
- b. Use a 2" block to distribute press loads.
- c. Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
- d. Check for straight with a straight edge on back of tube.
- e. 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
- f. Tag in-progress parts and place on in-progress shelf in CNC shop for machining.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

AD AD AD AD Complete
73-04 73-04 73-04 (initial or SGA#) 73-04 73-04
02 02 02 02 02

8. CNC Machining – 78633-01 / 78634-01

- Run CNC programs to machine keyways and slots in 78633-02 tubes with guides welded in place, after straightening.
- N/A f. Run CNC programs to machine keyways and slots in 78634-02 tubes with pads welded in place, after straightening.
- De-burr keyways and slots.
- Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

AD AD AD AD AD
73-04 73-04 73-04 73-04 73-04
05 05 05 05 05

9. Beam Welding – 78633-01

- Peg step: TIG weld 82735-06 cap to 82735-03 tube using jig to align cap to tube.
- TIG weld 78633-04 bushings into 78633-02 tube using ER308L rod, four places per tube, both sides.
- TIG weld 78633-05 stop bracket to 78633-02 tube using ER308L rod, four places per tube, both sides. Use jig to align stop brackets for height and position.
- TIG weld 78633-06 cap to 78633-02 tube.
- TIG weld step tube assembly from a. to back of 78633-02 tube using jig for alignment. Weld around step tube as far as possible, then close out tube by flattening protruding edge of step tube with a hammer. Complete weld after flattening.
- Record component and welding rod POs / WO on attached material list.
- Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

10. Beam Welding – 78634-01

- TIG weld 69830-11 guide tubes into 78634-02 tubes using ER308L rod, two places per down tube. Use jig to align guide tube to keyway and hole. Grind rosette welds flush.
- TIG weld 78633-04 bushings into 78634-02 tube using ER308L rod, four places per tube, both sides.
- TIG weld 69830-11 block to 78634-02 tube over 3rd keyway (see drawing) using ER308L rod.
- TIG weld 78634-04 cap to 78634-02 tube. Ensure 0.25" gap between cap and pad for basket fitting to enter top keyway.
- Record component and welding rod POs / WO on attached material list.
- Tag in-progress parts and place on in-progress shelf in welding shop for straightening.

AD AD AD AD AD
73-04 73-04 73-04 73-04 73-04
01 01 01 01 01

11. Beam Finishing – 78633-01 / 78634-01

Welding on one side of the beam causes the beam to curve. Beams must be straight prior to powder coating.

- Set beam on blocks on hydraulic press. Straightening in sections may be required depending on severity of curve.
- Use a 2" block to distribute press loads.
- Gradually work up to pressure required to make beam straight, usually about 800 psi is required. The same pressure generally works for beams from the same batch.
- Check for straight with a straight edge on back of tube.
- 78633-01 aft beams may require straightening on side as well, repeat steps a-d on side, using about 600 psi.
- Drill out bushings to F (0.257"), four places per beam, on drill press.
- Break sharp edges on stops and flatten bushing locations using sanding disc on die-grinder.
- Tag in-progress parts and place on in-progress shelf in welding shop for inspection.

MOUNTING BEAM FABRICATION – 78633-01 / 78634-01

12. Final Inspection – 78633-01 / 78634-01

To be completed by a different person than the previous steps.

- Inspect beams 78633-01 and 78634-01 for conformity to drawings.
- Tag in-progress parts ready for powder coating.

13. Powder Coating

- Parts are to be powder coated white in accordance with commercial practices.
- Record powder coating PO.
- Inspect powder coating on receiving.
- Tag in-progress parts ready for final assembly.

14. Final Assembly – 78633-01

To be completed after powder coating.

- Prepare step tube for grip tape by rubbing top surface with scotch-brite.
- Adhere 1" 3M Safety-Walk grip tape to top surface of step tube.
- Adhere P/N placard to back surface of beam.
- Ensure AN4 bolt can be inserted through bushings.
- Green tag complete beam assembly and place into stock.

15. Final Assembly – 78634-01

To be completed after powder coating.

- Clear powder coat from stop pin hole(s) with 5/16 (#4) centre drill.
- For 776 (short), 764 (medium) or 784 (long) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into UPPER guide with 69830-22 knob and MS21044C3 nut. Check for function.
- For 940 (extra large) basket installation: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
- If maintenance step is to be installed: Install #10-32 x 3" countersunk screw, 69830-21 stop, and 69830-23 spring into LOWER guide with 69830-22 knob and MS21044C3 nut. Check for function.
- Adhere P/N placard to back surface of beam.
- Green tag complete beam assembly and place into stock.

AD 73-04 02 AD 73-04 02 AD 73-04 02 AD 73-04 02 Complete AD 73-04 02 (initial or SCA #)

AD 73-04 02 AD 73-04 02 AD 73-04 02 AD 73-04 02 AD 73-04 02

AD 73-04 02 AD 73-04 02 AD 73-04 02 AD 73-04 02 AD 73-04 02

N/A AD 73-04 02

Work Order: 2016-72Material Tracking Sheet
Eurocopter AS350/AS355 Aft Mounting Beam

1 of 2

Date Opened: 11 MAY 2016

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
	<u>105</u>	<u>gc.</u>	<u>78633-01-02</u>	Aft Beam Assembly	(XX = -01 RH, -02 LH)	
Step 1				<i>Fabrication</i>		
	. 1		78633-02	Tube	1x2x0.065 Tube, 304 Stainless Steel	<u>16024</u>
	. 1		78633-04	Upper Guide	1x2x0.12 Tube, 304 Stainless Steel	<u>2015-69</u>
Step 2				<i>Machning</i>	<i>None</i>	
Step 3				<i>Fabrication</i>		
	. 4		78633-03	Guide	1x0.125 Bar, 304 Stainless Steel	<u>15073</u>
	. 4		78633-05	Stop Bracket	0.75x0.065 Sqr. Tube, 304 Stainless	<u>15038</u>
	. 1		78633-06	Cap	0.025" Sheet, 321 Stainless Steel	<u>3021</u>
	. 4		78630-04	Bushing	0.375 x 0.065 Tube, 304 Stainless Steel	<u>15073</u>
	. 1		82735-03	Tube	1.0 x 0.035 Tube, 316 Stainless Steel	<u>14103</u>
	. 1		82735-06	Cap	0.050 Sheet, 321 Stainless Steel	<u>3021</u>
Step 5				<i>Welding</i>		
	. A/R			Welding Rod	ER308L	<u>14028</u>
Step 7				<i>Straightening</i>	<i>None</i>	
Step 8				<i>Machning</i>	<i>None</i>	
Step 9				<i>Welding</i>		
	. A/R			Welding Rod	ER308L	<u>14028</u>
Step 11				<i>Finishing</i>	<i>None</i>	
Step 12				<i>Final Inspection</i>	<i>None</i>	
Step 13				<i>Powder Coating</i>		<u>16045</u>
		Detail				

Work Order: 2016-72

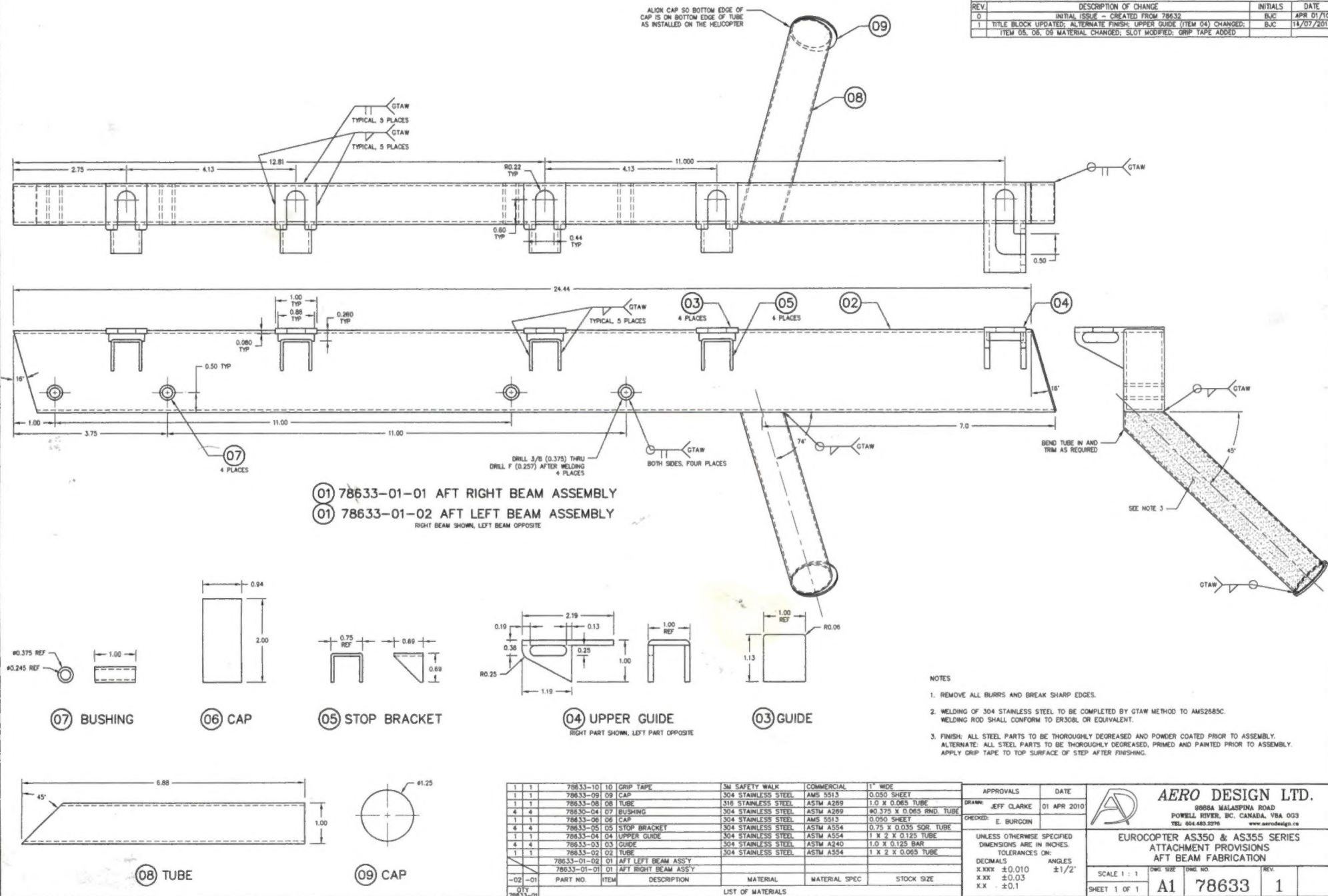
Material Tracking Sheet
Eurocopter AS350/AS355 Aft Mounting Beam

2 of 2

Date Opened: 11 MAY 2016

Ass'y Step	Qty	Drawing	Part Number	Description	Material	PO/WO
Step 14				<i>Final Assembly</i>		
	. 1		--	Grip Tape	1" 3M Safety Walk	
	. 1		--	P/N Placard	TZ tape, 1/2", white on black	

REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE -- CREATED FROM 78632	BJC	APR 01/10
1	TITLE BLOCK UPDATED; ALTERNATE FINISH: UPPER GUIDE (ITEM 04) CHANGED; ITEM 05, 06, 09 MATERIAL CHANGED; SLOT MODIFIED; GRIP TAPE ADDED	BJC	14/07/2014





WO#2016-72

Approved Manufacturing Facility 73-04

Form 20.F.06

Rev. Original 27 May 2013

2016-72

